

## **AMENDMENTS TO THE CLAIMS:**

1.     **(Previously Presented)** A ball game apparatus for playing a ball game by displaying at least a ball character on a screen of a display device, comprising:

        a racket-type input device to be moved in a three-dimensional space by a game player, said racket-type input device having a flat ball hitting portion;

        a piezoelectric buzzer incorporated in said racket-type input device which outputs an acceleration correlated signal according to an acceleration upon moving said input racket-type device in the three-dimensional space, said piezoelectric buzzer having a piezoelectric ceramic plate and electrodes respectively formed on main surfaces of said piezoelectric ceramic plate; and

        a game processor for receiving the acceleration correlated signal and causing a change in the ball character being displayed on the screen based on the acceleration correlated signal,

        wherein said piezoelectric buzzer is arranged within said racket-type input device in a manner wherein said main surfaces of said piezoelectric ceramic plate are in parallel with a surface of said flat ball hitting portion.

2.     **(Cancelled)**

3.     **(Previously Presented)** The ball game apparatus according to claim 1, further comprising:

        acceleration correlated signal transmitting means for transmitting the acceleration correlated signal in a wireless manner, and

enabling means for enabling an output of said acceleration correlated signal  
transmitting means to transmit the acceleration correlated signal when a magnitude level  
of the acceleration correlated signal is equal to or larger than a predetermined level.

4. **(Previously Presented)** The ball game apparatus according to claim 1,  
further comprising an information storage medium,

said game processor including at least operation processing means, image  
processing means, sound processing means and a memory;

said operation processing means executing a program code stored in said  
information storage medium and calculating at least a position, moving direction and speed  
of the ball character on the basis of an acceleration correlated signal outputted from said  
signal output means;

said image processing means generating image information including the ball  
character by use of image data stored in said information storage medium under control of  
said operation processing means;

said sound processing means reproducing sound by use of sound data stored in  
said information storage medium under control of said operation processing means;

said memory being used for at least said operation processing means to hold a  
process and result of an operation.

5. **(Previously Presented)** The ball game apparatus according to claim 4,  
wherein said information storage medium includes a non-volatile semiconductor memory.

Claims 6 - 8. **(Cancelled)**

9. **(Previously Presented)** The ball game apparatus according to claim 3, wherein said acceleration correlated signal transmitting means includes an infrared-ray emission element and a light receiving element which receives the infrared-ray from said infrared-ray emission element.

10. **(Previously Presented)** The ball game apparatus according to claim 1, wherein said game processor detects a timing that said acceleration correlated signal reaches a peak value, and determines based on said timing and a timing of said ball character whether said ball character is hit back and the parameter for movement of said ball character.

11. **(Previously Presented)** A ball game apparatus according to claim 1, wherein said signal output means includes at least one pair of acceleration sensors which are provided so as to sandwich an origin, and said game processor evaluates a moving speed of said input device in accordance with a sum of detection values of said pair of acceleration sensors and a rotating speed of said input device in accordance with a difference of said detection values of said pair of acceleration sensors.

12. **(Currently Amended)** A ball game apparatus for playing a ball game by displaying at least a ball character on a screen of a display device, comprising:

an input device to be moved in a three-dimensional space by a game player, said input device having a plurality of surfaces different from each other;

signal output means incorporated in said input device to output an acceleration correlated signal having a varying pulse width according to an acceleration upon moving said input device in the three-dimensional space; and

a game processor for receiving the acceleration correlated signal and determining, based on the varying pulse width of said acceleration correlated signal and a moving timing of said ball character that is a position of said ball character in a depth direction in said screen, a subsequent moving direction of said ball character as a parameter for a movement of the ball character,

wherein said signal output means includes a plurality of transmitting means, each of which transmits the acceleration correlated signal in a wireless manner, said plurality of transmitting means transmitting the acceleration correlated signal from the different surfaces of said input device.

13. **(Cancelled)**

14. **(Previously Presented)** The game apparatus according to claim 12, wherein said game processor determines a moving direction of said ball character by further taking a course of said ball character into account.

15. **(Previously Presented)** The game apparatus according to claim 1, wherein said game processor determines based on the acceleration correlated signal whether a

timing that said input device is swung by said game player and a moving timing of said ball character that is a position of said ball character in a depth direction in said screen are coincident with each other, and when the both timings are coincident with each other, determines based on at least the moving timing of said ball character a moving direction of said ball character as said parameter.

16. **(Previously Presented)** The game apparatus according to claim 15, wherein said game processor determines a moving direction of said ball character by further taking a course of said ball character into account.

17. **(Previously Presented)** The game apparatus according to claim 12, wherein said game processor detects a timing that said acceleration correlated signal reaches a peak value, and determines based on said timing and a timing of said ball character whether said ball character is hit back and the parameter for movement of said ball character.

18. **(Previously Presented)** The game apparatus according to claim 12, wherein said game processor detects a timing that said acceleration correlated signal reaches a predetermined value, and determines based on said timing and a timing of said ball character whether said ball character is hit back and the parameter for movement of said ball character.

19. **(Previously Presented)** The game apparatus according to claim 12, further comprising:

acceleration correlated signal transmitting means for transmitting the acceleration correlated signal in a wireless manner,

enabling means for enabling an output of said acceleration correlated signal transmitting means to transmit the acceleration correlated signal when a magnitude level of the acceleration correlated signal is equal to or larger than the predetermined level.

20. **(Previously Presented)** The game apparatus according to claim 12, further comprising an information storage medium,

said game processor including at least operation processing means, image processing means, sound processing means and a memory;

said operation processing means executing a program code stored in said information storage medium and calculating at least a position, moving direction and speed of the ball character on the basis of an acceleration correlated signal outputted from said signal output means;

said image processing means generating image information including the ball character by use of image data stored in said information storage medium under control of said operation processing means;

said sound processing means reproducing sound by use of sound data stored in said information storage medium under control of said operation processing means;

said memory being used for at least said operation processing means to hold a process and result of an operation.

21. **(Previously Presented)** The game apparatus according to claim 20, wherein said information storage medium includes a non-volatile semiconductor memory.

22. **(Previously Presented)** The game apparatus according to claim 12, wherein said ball game is a baseball game,  
said input device including a bat input device,  
said game processor causing a change in the ball character according to the acceleration correlated signal from said bat input device.

23. **(Previously Presented)** The game apparatus according to claim 12, wherein  
the ball game is a game using a racket,  
said input device including a racket input device,  
said game processor causing a change in the ball character according to the acceleration correlated signal from said racket input device.

24. **(Previously Presented)** The game apparatus according to claim 19, wherein said acceleration correlated signal transmitting means includes an infrared-ray emission element, further comprising a light receiving element which receives the infrared-ray from said infrared-ray emission element.

25. **(Previously Presented)** The game apparatus according to claim 12, wherein said signal output means includes at least one pair of acceleration sensors which are provided so as to sandwich an origin, and said game processor evaluates a moving speed of said input device in accordance with a sum of detection values of said pair of acceleration sensors and a rotating speed of said input device in accordance with a difference of said detection values of said pair of acceleration sensors.

26. **(Currently Amended)** A ball game apparatus for playing a ball game by displaying at least a ball character on a screen of a display device, comprising:

an input device to be moved in a three-dimensional space by a game player;

signal output means incorporated in said input device to output an acceleration correlated signal according to an acceleration upon moving said input device in the three-dimensional space; and

a game processor for receiving the acceleration correlated signal and determining, based on said acceleration correlated signal and a moving timing of said ball character that is a position of said ball character in a depth direction in said screen, a moving direction of said ball character as a parameter for a movement of the ball character after a hit.

27. **(Previously Presented)** The game apparatus according to claim 26, wherein said game processor determines a moving direction of said ball character by further taking a course of said ball character into account.



28. **(Previously Presented)** The game apparatus according to claim 26, wherein said game processor determines a moving speed of said ball character in accordance with a level of said acceleration correlated signal.

29. **(Previously Presented)** The game apparatus according to claim 26, wherein said input device includes a piezoelectric buzzer incorporated therein, said acceleration correlated signal being generated by said piezoelectric buzzer.

30. **(Previously Presented)** The game apparatus according to claim 26, wherein said game processor detects a timing that said acceleration correlated signal reaches a peak value, and determines based on said timing and a timing of said ball character the moving direction of said ball character.

31. **(Previously Presented)** The game apparatus according to claim 26, wherein said game processor detects a timing that said acceleration correlated signal reaches a predetermined value, and determines based on said timing and a timing of said ball the moving direction of said ball character.

32. **(Previously Presented)** The game apparatus according to claim 26, further comprising:

acceleration correlated signal transmitting means for transmitting the acceleration correlated signal in a wireless manner, and

enabling means for enabling said acceleration correlated signal transmitting means to transmit the acceleration correlated signal when a magnitude level of the acceleration correlated signal is equal to or larger than the predetermined level.

33. **(Previously Presented)** The game apparatus according to claim 26, further comprising an information storage medium,

said game processor including at least operation processing means, image processing means, sound processing means and a memory;

said operation processing means executing a program code stored in said information storage medium and calculating at least a position, moving direction and speed of the ball character on the basis of an acceleration correlated signal outputted from said signal output means;

said image processing means generating image information including the ball character by use of image data stored in said information storage medium under control of said operation processing means;

said sound processing means reproducing sound by use of sound data stored in said information storage medium under control of said operation processing means;

said memory being used for at least said operation processing means to hold a process and result of an operation.

34. **(Previously Presented)** The game apparatus according to claim 33, wherein said information storage medium includes a non-volatile semiconductor memory.

35. **(Previously Presented)** The game apparatus according to claim 26, wherein said ball game is a baseball game,  
said input device including a bat input device,  
said game processor causing a change in the ball character according to the acceleration correlated signal from said bat input device.

36. **(Previously Presented)** The game apparatus according to claim 26, wherein  
the ball game is a game using a racket,  
said input device including a racket input device,  
said game processor causing a change in the ball character according to the acceleration correlated signal from said racket input device.

37. **(Previously Presented)** The game apparatus according to claim 32, wherein said acceleration correlated signal transmitting means includes an infrared-ray emission element, further comprising a light receiving element which receives the infrared-ray from said infrared-ray emission element.

38. **(Previously Presented)** The game apparatus according to claim 26, wherein said signal output means includes at least one pair of acceleration sensors which are provided so as to sandwich an origin, and said game processor evaluates a moving speed of said input device in accordance with a sum of detection values of said pair of

acceleration sensors and a rotating speed of said input device in accordance with a difference of said detection values of said pair of acceleration sensors.

39. **(Currently Amended)** A ball game apparatus for playing a ball game by displaying at least a ball character on a screen of a display device, comprising:

an input device to be moved in a three-dimensional space by a game player;

an acceleration switch incorporated in said input device to output an ON signal when an acceleration upon moving said input device in the three-dimensional space becomes a predetermined value ~~or more~~; and

a game processor for receiving the ON signal and determining, based on a timing that said acceleration switch is turned on[[,]] and a moving timing that is a position of said ball character in a depth direction in said screen, a moving direction of said ball character as a parameter for a movement of said ball character after a hit.

40. **(Previously Presented)** The game apparatus according to claim 39, wherein said game processor determines a moving direction of said ball character by further taking a course of said ball character into account.

41. **(Previously Presented)** The game apparatus according to claim 39, wherein said acceleration switch includes a weight which is elastically biased by a spring.

42. **(Previously Presented)** The game apparatus according to claim 39, further comprising an information storage medium,

said game processor including at least operation processing means, image processing means, sound processing means and a memory;

said operation processing means executing a program code stored in said information storage medium and calculating the moving direction of the ball character on the basis of the ON signal outputted from said acceleration switch and the position of said ball character;

said image processing means generating image information including the ball character by use of image data stored in said information storage medium under control of said operation processing means;

said sound processing means reproducing sound by use of sound data stored in said information storage medium under control of said operation processing means;

said memory being used for at least said operation processing means to hold a process and result of an operation.

43. **(Previously Presented)** The game apparatus according to claim 42, wherein said information storage medium includes a non-volatile semiconductor memory.

44. **(Previously Presented)** The game apparatus according to claim 39, wherein said ball game is a baseball game,

said input device including a bat input device,

said game processor causing a change in the ball character according to the ON signal from said bat input device.

45. **(Previously Presented)** The game apparatus according to claim 39, wherein

the ball game is a game using a racket,  
said input device including a racket input device,  
said game processor causing a change in the ball character according to the ON signal from said racket input device.

46. **(Previously Presented)** The ball game apparatus according to claim 39, further comprising: ON signal transmitting means for transmitting the ON signal in a wireless manner.

47. **(Previously Presented)** The ball game apparatus according to claim 46, wherein said ON signal transmitting means includes an infrared-ray emission element, further comprising a light receiving element which receives the infrared-ray from said infrared-ray emission element.

48. **(Previously Presented)** The ball game apparatus according to claim 12, wherein each of said plurality of transmitting means includes an infrared light emitting diode.

49. **(Previously Presented)** The ball game apparatus according to claim 1, wherein said game processor detects a timing that said acceleration correlated signal reaches a predetermined value, and determines based on said timing and a timing of said

ball character whether said ball character is hit back and the parameter for movement of said ball character.

Claims 50-51.        **(Cancelled)**

52.    **(New)**        An information storage medium including a program readable by a game processor in a ball game apparatus for playing, with using an input device to be moved in a three-dimensional space by a game player, a ball game by displaying at least a ball character on a screen of a display device, wherein said input device includes signal output means for outputting an acceleration correlated signal according to an acceleration upon moving said input device in the three-dimensional space, and said program causes said game processor to function as:

receiving means for receiving the acceleration correlated signal; and

determining means for determining, based on said acceleration correlated signal and a moving timing of said ball character that is a position of said ball character in a depth direction in said screen, a moving direction of said ball character as a parameter for a movement of the ball character after a hit.

53.    **(New)**        An information storage medium including a program readable by a game processor in a ball game apparatus for playing, with using an input device to be moved in a three-dimensional space by a game player, a ball game by displaying at least a ball character on a screen of a display device, wherein said input device includes an acceleration switch for outputting an ON signal when an acceleration upon moving said

input device in the three-dimensional space becomes a predetermined value or more, and said program causes said game processor to function as:

receiving means for receiving the ON signal; and

determining means for determining, based on a timing that said acceleration switch is turned-on and a moving timing of said ball character that is a position of said ball character in a depth direction in said screen, a moving direction of said ball character as a parameter for a movement of the ball character after a hit.